

AMENDMENTS TO THE DRAWINGS

15 replacement sheets identified as Figures 1-15, respectively are submitted herewith.

Attachment: 15 Replacement Sheets

REMARKS/ARGUMENTS

The Examiner has objected to the drawings because they do not provide the corresponding figure number with each drawing. Replacement sheets for all of the drawings are submitted herewith which are identified as Figures 1-15. Accordingly, the objections to the drawings should now be obviated.

Claims 15-26 stand rejected under 35 USC 112, first paragraph, because the specification, while being enabling for Ti-6Al-4V-1.6B alloy and Ti-6Al-4V-2.9B alloy, in the opinion of the Examiner, does not reasonably provide enablement for all boron-containing titanium alloys. For the reasons set forth hereinafter, it is requested that this rejection be withdrawn by the Examiner.

The two independent claims 15 and 18 both have been amended herein to include the recitation that the boron containing titanium alloy is Ti-6Al-4V-XB wherein X is in the range of from 0.01% to 18.4% by weight. This recitation is fully supported by the specification of the present application.

Paragraph [054] of the specification clearly states that the methods described therein with respect to the boron containing titanium alloys Ti-6Al-4V-1.6B and Ti-6Al-4V-2.9B are applicable to wide range of titanium alloys for boron addition as low as 0.01% and as high as 18.4% by weight depending upon the composition and the thermal-mechanical response of the alloy. Accordingly, it is submitted that claims 15 and 18, as amended herein, and all of the dependent claims are supported by the specification which is enabling for the specific boron-containing alloys now recited therein.

Claims 15-26 stand rejected under 35 USC 112, second paragraph, as being incomplete for omitting an essential step, namely, providing a microstructural mechanism map. This

rejection is obviated by the amendment of claims 15 and 18 herein to recite the steps of preparing a microstructural mechanism map for a boron-containing titanium alloy and selecting beta-phase strain rates and temperatures from the prepared microstructural mechanism map.

In claim 18 as amended herein, the method step in d) now recites deforming the boron-containing titanium alloy under the selected beta-phase strain rates and temperatures determined in step c), thereby clearly identifying the boron-containing titanium alloy in step d) as the same alloy as in steps a)-c).

Claim 23 has been amended to correct the dependency thereof and is now dependent on claim 18.


Claims 24 and 25 have been cancelled, thereby obviating the Examiner's objections to the claim language therein.

Claim 26 stands rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Huang (US 5131959). Claim 26 has been cancelled.

Since the Examiner has indicated that claims 15-25 are free from art rejection, it is submitted that claims 15, 17-21 and 23, as amended herein, are now allowable to Applicants, and formal allowance thereof is earnestly solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Frank P. Presta
Reg. No. 19,828

FPP:ils
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100